Chapter 13
REAL PROPERTY MAINTENANCE ACTIVITIES

Real Property Maintenance Activities (RPMA) are those actions taken to ensure that real property is acquired, developed, operated, maintained, and disposed of in a manner responsive to the theater mission. Acquisition, disposal, major and minor construction activities for new facilities, and additions or alterations to existing facilities are covered in Chapter 12. This chapter includes operation, maintenance, and repair of facilities and utilities, fire prevention and protection, and refuse collection and disposal.

The RPMA function does not include maintenance and repair of mobile and portable equipment or other items not classified as real property. Some of the coordination aspects of Theater of Operations RPMA, however, do include many tasks not normally associated with minor construction and routine maintenance and repair aspects of RPMA.

RESPONSIBILITIES

Real Property Maintenance Activities are administered in the COMMZ by the Theater Army Area Command (TAACOM) through its subordinate Area Support Groups (ASGs). Support for RPMA is provided on an area basis to all installations, organic activities, and tenant units. The Engineer Command (ENCOM) at Theater Army (TA) level gives overall supervision and technical assistance. Administration of RPMA forward of the corps rear boundary is a corps responsibility. Command relationships in the TA are described in FM 100-16.

PLANNING

The ENCOM and the responsible engineer staff must consider current and anticipated RPMA requirements for their area of operations. This will include—

- Maintenance and repair in the COMMZ.
- Estimates of potential requirements for repairing war damage.
- Phase planning and target date requirements.

Any alteration or renovation work that is planned for existing structures should be designed according to the guidance of the AFCS, and should be of a nonpermanent nature. Plans for major repairs, renovations, or alterations on existing structures must include estimates for labor and materials. Planners may use estimating sources such as the Engineering Performance Standards (EPS) or a commercial estimating guide such as the Means Estimating Guide.

There may be instances in the Theater of Operations where the estimated materials or labor resources are in short supply or unavailable. Local materials and labor should be used to accomplish RPMA wherever possible. With the approval of the TA Engineer, and with the support of ENCOM resources, the local engineer may change the design and/or scope of planned work to take advantage of locally available personnel and resources.

OPERATION OF UTILITIES

In the Theater of Operations, the operation and maintenance or upgrade of existing utilities as well as the construction, operation, and maintenance of new utilities systems may be an engineer responsibility. Utilities systems include electrical generating and distribution systems, waste water collection and treatment systems, and other special utilities systems such as cooling and refrigeration, compressed air, and heating systems. Operating these systems requires specially trained personnel. They may be available through the ENCOM, trained locally, or hired from the local work force.

Since utilities systems must be reliable, measures should be taken to ensure their correct operation and to provide increased security if the situation warrants. Such measures include controlled access, continuous inspection, and adequate security personnel.

POWER GENERATION AND DISTRIBUTION SYSTEMS

If existing electrical generating and distribution systems are substandard or inadequate for military requirements, either they will have to be upgraded or new systems

installed. Army Regulation 420-43, TM 5-683, and TM 5-684 give detailed guidance on installation, maintenance, and repair of electrical generation and distribution systems. Electrical supply in the Theater of Operations can be accomplished in phases. Portable generating sets can supply minimum power requirements until fixed generation and distribution systems are installed.

WASTE WATER COLLECTION AND TREATMENT SYSTEMS

Large troop concentrations at fixed facilities generate requirements for sewage and waste water collection and treatment. When existing fixed facilities are occupied, they usually include waste water systems. However, these may not be operational or suitable for use by military forces. These systems should be operated, maintained, and repaired by engineer elements or qualified indigenous personnel. Construction, operation, maintenance, and repair of adequate sewage disposal systems are described in AR 420-46, TM 5-665, and TM 5-666.

Field sanitation measures, such as pit latrines and grease sumps, or portable chemical toilets and waste treatment plants, may be used temporarily until fixed facilities are completed and in operation.

As with all AFCS design in the Theater of Operations, the standard of construction for waste water systems will be nonpermanent, and designed to require minimum maintenance during the limited time anticipated for the period of occupation. Locally-available materials may be used if approved by the TA Engineer. Engineers will perform RPMA and operate the system as directed by the TA engineer.

OPERATION OF OTHER UTILITIES SYSTEMS

In some areas, other types of central utilities systems may have to be operated by theater forces. These systems include heating, cooling, or refrigeration. Often, existing facilities will have utility equipment that must be repaired and/or maintained if it is to be operated. Responsibility for this work will be directed by the TA engineer.

Local, portable, or unit systems such as stoves and portable refrigeration units will be maintained, repaired, and operated by the using unit. Central utility systems such as steam plants, cold storage warehouses, or cooling plants are usually maintained by engineers. Where existing facilities are used, these systems may also be maintained by ENCOM assets.

MAINTENANCE AND REPAIR OF FACILITIES

Maintenance and repair of facilities are the responsibilities of a local commander, supported by engineer assets. Existing facilities that need maintenance and repair before they can be used are repaired to minimum standards. Repair materials must be estimated and prestocked to ensure they will be available when needed.

Much short-term maintenance and repair work can be performed by local troops organized into self-help teams. These teams work with local logistics sources or supporting engineers to obtain the materials and tools they need. Adequately trained self-help teams can perform the majority of maintenance and repair work on their facilities, thereby releasing engineer troops to accomplish more critical duties, complex repair work, and major construction projects.

When major repairs are required, the engineer unit assigned to the ASG, augmented when necessary with assets from the ENCOM,

makes repairs according to priorities given by the TA engineer. Generally, the priorities are scheduled based on the impact the work has on the mission.

After immediate and ongoing maintenance and repair requirements are determined, a repair and maintenance program will be established using self help and supporting engineer assets and/or local personnel to accomplish the work. If the program is extensive or long term, the unit commander should coordinate with the TA engineer to initiate a continuing facility engineer operation at the facility or installation. The facility engineer will then coordinate all requirements and resources needed to accomplish the mission. Further guidance on facilities maintenance and repair may be found in AR 420-22, AR 420-70, TM 5-610, and DA Pam 738-570.

FIRE PREVENTION AND PROTECTION

Construction standards and materials in the Theater of Operations make facilities very susceptible to fire damage and catastrophic loss of life or materials. Technical Manual 5-315 gives specific guidance for fire fighting and rescue procedures in the Theater of Operations. This technical manual prescribes the assignment of fire fighting assets based on the supported population or facility area. For example, airfields, troop populations of 5,000 to 10,000 persons, or storage areas containing more than 100,000 square feet of storage space, are each allocated at least one fire pumper truck team.

In all cases, and especially at smaller installations and facilities that do not have assigned fire protection equipment, the commander has responsibility for fire prevention and protection. All Army, command, and local fire regulations must be enforced. Programs of inspection must be established and self-help fire fighting responsibilities assigned. Fire protection measures available to the commander include strict enforcement of rules, setting up alarm and notification procedures, procuring and making available extinguishers and other fire fighting equipment, and training personnel in fire prevention and protection measures. Army Regulation 420-90 and DA Pam 420-2 provide further information about fire prevention and protection.

REFUSE COLLECTION AND DISPOSAL

Improperly handled refuse can be a safety as well as a health hazard. The local commander is usually made responsible for refuse collection and disposal. The command's engineers accomplish the task. Guidance on refuse collection and disposal may be found in AR 420-47 and TM 5-634.

Refuse disposal in the Theater of Operations is usually accomplished by landfilling, burning, or removal from the area. Landfilling requires a suitable area and equipment to perform excavation, spreading, compaction, and backfilling. This type of work lends itself well to engineer equipment and management. Other troops may bring refuse to the site. Burning may be combined with landfilling to reduce the volume and extend the life of the landfill operation.

Besides burning, other methods of reducing the volume of refuse are compaction and selective disposal. Selective disposal is the separation of certain types of refuse, such as

wood or metal, from the refuse to be buried. The separated material is then stored or reused. Compaction is accomplished with specialized equipment for collecting and compacting refuse before it is dumped into the landfill. At the landfill site, special mobile compaction equipment may be used to reduce the volume of the refuse before it is covered. Other compaction and refuse handling techniques include compacting and baling refuse for burial or removal from the area.

Refuse collection and disposal techniques depend on the volume of refuse to be generated, the duration of facility occupation, the presence of existing collection facilities, the resources available to perform the work, the area where the facility will be located, the situation, and environmental aspects of the area.

Special consideration should be given to hazardous waste, especially waste products generated by medical facilities and maintenance operations. Every attempt should be made to dispose of hazardous waste in accordance with appropriate regulations. Improper disposal of such products may cause serious illness or death to those who operate landfills or cause irreversible damage to the environment.